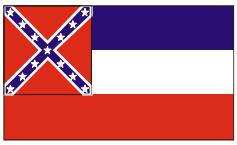

MISSISSIPPI

FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 ($)	Enacted FY 2004 ($)	Pres. Budg. FY 2005 ($)
SAUCIER			
SRS-4153 SO Inst Forest Genetics	1,785,000	1,828,965	1,854,985
STARKVILLE			
SRS-4502 Wood Products Insects	1,035,000	1,025,703	1,040,955
SRS-4801 Forest Inv & Analysis	658,000	658,000	658,000
STARKVILLE TOTAL	1,693,000	1,683,703	1,698,955
STONEVILLE			
SRS-4155 Cntr for Bottomland Hardwoods	3,639,462	3,606,769	3,664,336
MISSISSIPPI TOTAL	7,117,462	7,119,437	7,218,276

RESEARCH & DEVELOPMENT, a division of the USDA Forest Service (FS R&D), strives to be the "go to" organization for information and solutions to sustain forests and rangelands and the values they provide people. FS R&D has the flexibility to address today's issues effectively and to respond to tomorrow's needs. Among the world's leaders in forest conservation research, scientists contribute to the stewardship of land, real property and society by providing research results that help create jobs and affordable homes, and improve the health of trees, forests and forest ecosystems. Innovative research products permit the Forest Service and other public and private land managers to monitor and manage forest responses to environmental change, contributing significantly to the sustainability of the nation's forests and rangelands and improving human health.

FS R&D operates six research stations, the Forest Products Laboratory, and the International Institute of Tropical Forestry located in Puerto Rico. It employs over 500 scientists and hundreds of technical and support personnel at 67 field sites throughout the nation. The FY 2005 President's Budget includes $280,654,000 for Forest and Rangeland Research.

The Southern Research Station, with headquarters in Asheville, NC, and 26 Research Work Units in 11 States, conducts forest research and development in laboratories, on university campuses, and at experimental forests in the 13 Southern States (i.e., FL, LA, OK, NC, KY, GA,

SC, TN, MS, TX, AR, AL, and VA). The Southern Research Station manages a variety of units in the State of Mississippi. Three Research Work Units are headquartered in the State, at Saucier, Starkville, and Stoneville. In addition, the Station maintains three sub-units and three experimental forests in Mississippi.

The FY 2005 President's Budget includes $50,640,000 for the Southern Research Station, an increase of $1,304,000 above FY 2004 Final Appropriation.

OXFORD

Tallahatchie Experimental Forest. Located near Oxford, the Tallahatchie Experimental Forest contains several small-forested basins. Streams in these basins have been instrumented (since 1959) to monitor precipitation, air temperature, barometric pressure, stream-flow, and water chemistry.

Forest Hydrology Laboratory. The Center for Bottomland Hardwoods Research unit jointly occupies the Forest Hydrology Laboratory with the Holly Springs Ranger District of the National Forests in Mississippi. The Fish Biology Laboratory housed here is equipped to conduct controlled environment research on freshwater fish.

SRS-4155 Subunit, Center for Bottomland Hardwoods Research. The majority of this unit is located at Stoneville. This subunit at Oxford conducts hydrologic and aquatic ecology research to identify rational forest management strategies that will aid in the maintenance of diverse, healthy ecosystems; allow sustainable use of forest resources; promote recovery of depleted species and communities; and produce quality water. The project leader is located in Starkville, MS.

SAUCIER

Harrison Experimental Forest. The main facilities of the Southern Institute of Forest Genetics are located on the Harrison Experimental Forest, which was established in 1934. The Harrison was selected as representative of 3 million acres of cutover and second growth longleaf pine land in southern Mississippi.

SRS-4153, Southern Institute of Forest Genetics. This research work unit is co-located at the Harrison Experimental Forest, Gainesville, FL and College Station, TX. Its mission is to discover the principles of heredity that operate in southern forests and demonstrate how these principles may be applied to sustain and enhance forest quality and productivity.

STARKVILLE

Mississippi State University. One unit and two subunits are located on the campus of Mississippi State University. Some offices and laboratories are located in Thompson Hall with the School of Forestry.

SRS-4155 Subunit, Center for Bottomland Hardwoods Research. The majority of this unit is located at Stoneville. Researchers in the Starkville subunit are developing methods of collecting, conditioning, and storing eastern forest tree seeds that will create and maintain high seed

quality. The Project Leader is stationed at Stoneville.

SRS-4502, Wood Products Insect Research. The mission of this unit is to improve the protection of wood products against termite damage, define the role of termites in forest ecosystems, and understand their impact on forest health. This unit cooperates with the Environmental Protection Agency and State Pesticide Registration authorities in efficacy testing for all new termite control prior to their registration for use in the United States.

SRS-4801 Subunit, Forest Inventory and Analysis (FIA) for Southern States. This subunit is part of the Forest Inventory & Analysis (FIA) unit headquartered in Knoxville, TN, with subunit locations in Asheville, NC, and Starkville, MS. The Forest Inventory and Analysis unit develops, analyzes, and maintains forest resources information for the southern States, Puerto Rico, and the Virgin Islands' and conducts research to provide improved inventory and evaluation techniques. The last inventory for Mississippi was the periodic one completed in 1994.

STONEVILLE

Delta Experimental Forest. This 2600-acre bottomland forest is owned by Mississippi State University and managed by the Center for Bottomland Hardwoods Research under a long-term cooperative agreement. Regeneration techniques for hardwood plantations on heavy clay soils are being developed and evaluated on the Delta Experimental Forest.

Southern Hardwoods Laboratory. This facility supports research on physiology, pathology, entomology, wildlife, and silviculture including GIS, tree ring, soil, water, and plant tissues analyses.

SRS-4155, Center for Bottomland Hardwoods Research. This unit is co-located at Oxford, Starkville, and Stoneville. The mission of the unit is to provide the scientific basis for sustainable management of southern bottomland hardwood and wetland forests and associated stream ecosystems.

PROGRAM CHANGES

- The FY 2005 President's Budget calls for increased research in areas associated with the President's Healthy Forests Initiative, including invasive species impacts, and the expansion of technology transfer activities. The FY 2005 President's Budget also provides new funding for research on water quality and quantity issues; and funding to cover inflationary fixed cost increases.
- Forest Service Research and Development will lead an Agency-wide effort to optimize the delivery and practical use of research findings. This is essential to successful implementation of Forest Service priorities, including the President's Healthy Forest Initiative. Opportunities have been identified that leverage current science and technology applications efforts in healthy forests applied science, watershed management, invasive species, hazardous fuels utilization and management, and community preparedness. New funds in FY 2005 will be targeted to leading-edge technical assistance on a competitive basis.

- Funding increases of $25,765 for SRS-4153, $15,103 for SRS-4502, and $57,004 for SRS-4155 will used to cover fixed cost (facilities, salaries, utilities, etc.).

SIGNIFICANT RESEARCH PRODUCTS

- Conducted laboratory screening on two termiticides and field tests on eighteen termiticides and five impregnated barriers. Demand for testing of products proposed for registration continues to grow, and the Forest Service increased its user fees in FY 2003 and hired additional field personnel for the testing program in FY 2004 from the proceeds.
- Collected and mapped termite species from 465 forest locations in Mississippi and specimens of decaying wood that either contains or does not contain termites to determine what fungi or chemicals are present that encourage or inhibit termite infestation. This will provide long term understanding of termite behavior that will improve control strategies.
- Determined the optimum age for tree selection in tree improvement programs for best growth and diameter. This will allow the selection age to be dropped from age 10 to age 8, improving the efficiency of tree improvement programs.
- Developed a better system for crossing and producing single genotype structures of the fusiform rust fungus. This will improve the efficiency of researchers and screeners involved in rust research.
- One scientist has worked extensively in Afghanistan on the problems involved in seed production.
- Increased understanding of the reproductive behavior of freshwater mussels.

SOME CLIENTS/COLLABORATORS:

Association of Structural Pest Control Registration
Boise Cascade Corporation
Bowater Corporation
Center for Plant Conservation
Crown Vantage Corporation
Ducks Unlimited
Gulf States Paper Corporation
Gulf States Utilities
Hebrew University of Jerusalem